UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MAR 27 2017

Mr. Steve Steach
Refinery Manager
Torrance Refining Company
3700 West 190th Street
Torrance, CA 90509-2929

Sent Certified Mail No. 7016 1370 0000 2234 8251
Return Receipt Requested

RE: Notice of Inspection Findings and Request for Information Pursuant to Clean Air Act Section 114 for Torrance Refining Company

Dear Mr. Steach:

On November 1 through November 4, 2016, representatives from the U.S. Environmental Protection Agency ("EPA") Region IX conducted an inspection of the Torrance Refining Company's ("TRC") refinery, located at 3700 West 190th Street, Torrance, California ("Facility"). EPA's inspection was conducted to determine compliance with the Risk Management Program ("RMP") promulgated under Section 112(r)(7) of the Clean Air Act ("CAA"), and the General Duty Clause under Section 112(r)(1) of the CAA.

The inspection primarily focused on three principal elements of the RMP: the Management System used by TRC to implement the RMP; the supporting documentation for Off-site Consequence Analyses ("OCA"); and the operation of the Hydrofluoric Acid ("HF") Alkylation Unit including targeted Piping and Instrumentation Diagram (P&ID) field verifications of process and safety equipment within the unit.

A summary of the inspection findings is provided herein for your information and response. These findings describe conditions observed at the facility at the time of the inspection and subsequently provided in the TRC's document submittals dated November 4 and November 23, 2016 for potential areas of noncompliance with CAA RMP regulations as set forth in 40 C.F.R. Part 68 and the General Duty Clause under Section 112(r)(l) of the CAA. Any omissions in the report shall not be construed as a determination of compliance with those portions of 40 C.F.R. Part 68 or any other applicable regulations.

With this letter and its enclosure ("Findings and Information Request"), EPA seeks additional information and documents concerning TRC's compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r) and the regulations thereunder at 40 C.F.R. Part 68. This Information Request is authorized pursuant to Section 114 of the CAA, 42 U.S.C. § 7414. Your responses to this letter

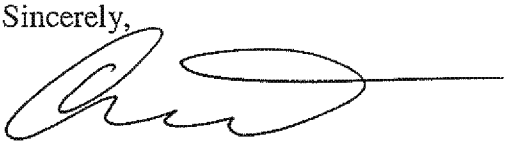
must be made by a letter signed by a person or persons duly authorized to represent TRC. Please send your responses in an electronic format and via certified mail, return receipt requested, so that they are received by April 27, 2017.

Address your submittal to:

Jeremy Deyoe
U.S. Environmental Protection Agency, Region IX
75 Hawthorne St. (SFD-9-3)
San Francisco, CA 94105

If you have questions about the legal aspects of this Information Request, please contact Mr. Andrew Helmlinger, U.S. EPA Assistant Regional Counsel, at (415) 972-3904 or Helmlinger.Andrew@epa.gov. The Region IX technical contact for this Information Request is Jeremy Deyoe, EPCRA/RMP Compliance Officer. Mr. Deyoe can be reached at (415) 972-3081 or Deyoe.Jeremy@epa.gov. We thank you in advance for your cooperation.

Sincerely,



Enrique Manzanilla, Director
Superfund Division

Enclosures
Information Request (Instructions, Definitions, Requests)

cc: Wayne Nastri, Executive Director, South Coast Air Quality Management District
Martin Serna, Chief, Torrance Fire Department
Bill Jones, Chief, Los Angeles County Fire Department
Clyde Trombettas, PSM Chief, California Occupational Safety and Health Administration
Barbara Lee, Director, California Department of Toxic Substances Control
Paul Penn, California Environmental Protection Agency

Enclosure

Notice of Inspection Findings

This summary of inspection findings describes conditions observed at the Facility at the time of the inspection combined with reviews of documentation, and identies potential areas of noncompliance with CAA RMP regulations as set forth in 40 C.F.R. Part 68 and the General Duty Clause under Section 112(r)(1) of the CAA. Any omissions below shall not be construed as a determination of compliance with those portions of 40 C.F.R. Part 68 or any other applicable regulations.

Chemical Accident Prevention Provisions, 40 C.F.R. Part 68, Subpart A – General

1. **Management – 40 CFR § 68.15(a):** ***The owner or operator of a stationary source with processes subject to Program 2 or Program 3 shall develop a management system to oversee the implementation of the risk management program elements.***

   Based on interviews and the review of related documents, the TRC RMP management system does not appear to be sufficiently defined or cohesively structured to fulfill adequate oversight and implementation of the Risk Management Program.

   At the time of the inspection, TRC's overall management structure at the Facility was different from that of ExxonMobil, its prior owner. New positions, such as the addition of a Reliability Department Manager, are substantively different than the management system as it appears in the RMP, and therefore does not reflect TRC's implementation of the RMP elements. Furthermore, a Management of Organizational Change or similar analysis was not conducted to ensure that Risk Management and process safety responsibilities for changing positions was not lost during the transition, or are accurately reflected in the RMP.

   According to the Refinery Manager, at the time of the inspection, TRC had several different RMP management system document sources including: pre-existing ExxonMobil RMP and process safety information; RMP related documents purchased from another refiner; and PBF Energy's own specific policies and procedures. TRC offered no schedule or plan for the consolidation, transition, harmonization or implementation of these various components of its RMP. The result is a stated management system that appears superficial, and does not sufficiently describe TRC's actual management system structure.

2. **Management – 40 CFR § 68.15(c):** ***When responsibility for implementing individual requirements of this part is assigned to persons other than the person identified under paragraph (b) of this section, the names or positions of these people shall be documented and the lines of authority defined through an organization chart or similar document.***

   Based on the inspection team's review, TRC did not document each individual responsible for implementing the elements of the RMP. For example, TRC's August 1, 2016 RMP update identified Stephanie Angkadjaja, Safety Engineer, as the person responsible for Part 68 implementation. However, during the inspection, several different facility representatives were identified as having the responsibility for implementing RMP elements. TRC did not offer an organizational chart that

correctly identified this matrix of responsibilities as required by this subpart.

Chemical Accident Prevention Provisions, 40 C.F.R. Part 68, Subpart B – Hazard Assessment

3. **Worst Case Release Scenario Analysis –40 C.F.R. § 68.25(b)(1):** ***For substances in a vessel, [The worst-case release quantity shall be the…] greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity.***

   Based on the inspection team's review of the OCA supporting documentation, TRC did not accurately determine and subsequently use the worst case release quantity of hydrofluoric acid in the toxic Worst Case Scenario analysis ("WCS"). Errors in several independent elements have the potential to impact the actual maximum quantity that should be used in the OCA and subsequently the predicted offsite consequence. For example:

a. In document TORC-EPAIX16 002527, TRC identifies that the WCS toxic determination includes an administrative control on the fill level for each acid settler. TRC represents that an administrative level corresponds to the RMP reported vessel amount. However, at the time of the inspection, Acid Settler #2 was observed to be at a height exceeding the stated administrative control level. Additional review of on-site logs indicate that the Acid Settler level was regularly at a height exceeding the administrative control lever and on at least one occasion significantly higher (October 9, 2016). If the acid settler operates at a higher level than the RMP OCA documentation identified administrative control level, the administrative control is not functioning to limit the maximum quantity in the vessel, and the release quantity used for calculation of the toxic WCS must be correspondingly higher. As such the reported settler quantity used in the modeling appears to be inaccurate.

b. Toxic WCS calculations provided in document TORC-EPAIX16 002523 identify the quantity of HF in each acid settler. The quantity of HF in the acid storage vessel is identified to be more than the quantity in each acid settler. For the purposes of the WCS OCA, TRC selected the volume in a single acid settler as the largest "single vessel" in the calculation. However, the quantity of HF reported in TRC's most recent RMP, and used to determine the WCS, is only 5,200 pounds, and not the higher volume contained in either acid settler. The RMP identifies "release barriers and modified HF catalyst" as passive mitigation considered. TRC subsequently used the described passive mitigation as justification for reducing the amount of HF in the WCS calculations to an HF equivalent. Such an approach is not consistent with the regulatory requirements found in 40 C.F.R. § 68.25(b) as described above.

   Furthermore, the acid storage vessel quantity that TRC used is larger than the quantity in the settler.

c. According to TRC, to keep the modified HF catalyst at the appropriate percentage in the alkylation process, makeup or separated catalyst must be mechanically pumped into the process. TRC subsequently claims that the HF modification process serves as passive mitigation. However, based on inspection team review this does not appear to be the case. The definition of mitigation, from 40 C.F.R. § 68.3, is as follows:

   Mitigation or mitigation system means specific activities, technologies, or equipment designed or deployed to capture or control substances upon loss of containment to minimize exposure of the public or the environment. Passive mitigation means equipment, devices, or technologies that function without human, mechanical, or other energy input. Active mitigation means equipment, devices, or technologies that need

human, mechanical, or other energy input to function.

Based on this definition, mechanically pumping and monitoring modified HF catalyst quantities, levels, or percentages is not passive mitigation, as it requires human, mechanical or other energy input to function. EPA has previously addressed the issue of using an acid aerosol reducing additive as passive mitigation, which can be found at:

https://emergencymanagement.zendesk.com/hc/en-us/articles/211413968-Acid-aerosol-reducing-additive-as-passive-mitigation

d. The inspection team observed that TRC used EPA's RMP*Comp model to determine the WCS endpoint. In that determination, TRC appears to have erroneously selected a percentage of hydrofluoric acid as the modeling chemical instead of selecting anhydrous hydrofluoric acid. Such an error reduces the accuracy of the model and is an incorrect application. The issue is further confused by TRC's selection of an endpoint of 3.2 miles for which they offer no clear basis.

4. **Worst Case Release Scenario Analysis –40 C.F.R. § 68.25(a)(2)(iii):** ***Additional worst-case release scenarios for a hazard class if a worst-case release from another covered process at the stationary source potentially affects public receptors different from those potentially affected by the worst-case release scenario developed under paragraphs (a)(2)(i) or (a)(2)(ii) of this section.***

Inspection team members evaluated documents and maps related to all of TRC's RMP regulated processes. Based on those reviews TRC did not report a WCS for the railcars that are filled and staged at the northwest corner of the refinery. The flammable WCS for a staged railcar affects different receptors than the reported flammable WCS. Following EPA's review, it appears that TRC incorrectly determined that no additional offsite receptors are impacted by railcar OCA results.

5. **Worst Case Release Scenario Analysis –40 C.F.R. § 68.30(a):** ***The owner or operator shall estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in §68.22(a).***

Based on a review of documents, it appears that TRC did not correctly identify the center point location of the butane storage sphere, which is identified as the flammable WCS. As a result, the OCA does not accurately identify the off-site receptors and affected population.

Chemical Accident Prevention Provisions, 40 C.F.R. Part 68, Subpart D – Program 3 Prevention Program

6. **Process Safety Information – 40 C.F.R. § 68.65(d)(1)(ii):** ***Piping and instrument diagrams (P&ID's)***

TRC did not adequately identify instrumentation, piping, and valve configurations on P&IDs. During the inspection, it was observed that P&ID 05A0106D01, rev. 19 (TORC-EPAIX16-000191) did not

match the equipment in the field. For example, two pressure indicators and manual valves were not listed on the P&IDs.

7. **Process Safety Information – 40 C.F.R. § 68.65(d)(1)(vi):** ***Design codes and standards employed***

During the field inspection of the HF Alkylation Unit, pressure vessel D5C-31 was inspected to determine if nameplates were present and if the information on the nameplates were accurate. Review of the nameplate information affixed to vessel D5C-31 found no National Board Inspection Code (NBIC) nameplate affixed to the vessel for the replacement of a leaking vessel nozzle in May 2016. Section 5.7.2(c) of the NBIC Part 3, Section 5.7.2 (Stamping Requirements for Repairs) requires the stamping or nameplate be applied adjacent to the original or manufacturers nameplate for repairs to pressure vessels and that the stamping or nameplate include the date of the repair that corresponds with the date on associated Form R-1.

8. **Operating Procedures –40 C.F.R. § 68.69(a):** ***The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.***

Based on a review of documents, TRC did not fully implement its operating procedures to safely conduct HF-related activities, including but not limited to the unloading of HF. For example: TRC did not produce completed and signed operating procedures for the four unloadings of HF from July 30, 2016 through September 2, 2016. In other instances, operating procedures were observed to not be completely signed off as required and did not include a justification or explanation for why certain steps were incomplete.

In some instances, safeguards such as fire water monitor systems, safety shower alarms and cameras were identified in handover logs as not working during HF unloading. TRC documentation did not identify any alternate safeguards or changes to the procedures on these occasions.

9. **Operating Procedures –40 C.F.R. § 68.69(a)(1)(iv):** ***Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner.***

At the time of the inspection, the emergency operating procedure OM-05-306, available in the control room, did not clearly indicate who is involved with completing the steps, specifically the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner.

10. **Operating Procedures –40 C.F.R. § 68.69(a)(2)(i) – (ii):** ***Consequences of deviation; and steps required to correct or avoid deviation.***

TRC did not include operating limits within operating procedure OM-05-005 for the unloading of HF to 5C-31. Several steps in the operating procedure include specific direction (TORC-EPAIX 004196), but there are no operating limits identifying what is otherwise acceptable, nor are there any steps required to correct or avoid deviation.

11. **Mechanical Integrity – 40 CFR § 68.73(d)(3):** ***The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.***

In a number of instances, TRC did not test critical safety systems, including pushbutton water deluge systems and critical electrical equipment within the HF Alkylation Unit, at the identified frequency documented on the list of critical safety systems for the Alkylation unit, TORC-EPAIX16 000678 – 000681.

12. **Mechanical Integrity – 40 CFR § 68.73(e):** ***The owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in §68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.***

TRC did not correct deficiencies in equipment that were identified as being outside of an acceptable operating range in a safe and timely manner. Safety systems and equipment within the Alkylation unit were identified as being non-operational on a recurring basis. Some were not fixed for multiple weeks, even those identified as safeguards.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Enclosure

Information Request
Torrance Refining Company

Please provide the information requested in the Information Request section of this Enclosure such that it is *received* by no later than **April 27, 2017**.

INSTRUCTIONS

1. Please provide a separate response to each request, and identify each response by the number of the request to which it corresponds. For each document produced, identify the request to which it is responsive.

2. Knowledge or information that has not been memorialized in any document, but is nonetheless responsive to a request, must be provided in a narrative form.

3. The scope of this Information Request includes all information and documents obtained or independently developed by TRC, its attorneys, consultants or any of their agents, or employees.

4. TRC may not withhold any information from EPA on the grounds that it is confidential business information. EPA has promulgated regulations, under 40 CFR Part 2, Subpart B, to protect confidential business information that it receives. TRC may assert a business confidentiality claim (in the manner specified in 40 CFR § 2.203(b)) for all or part of the information requested by EPA. However, business information is entitled to confidential treatment only if it satisfies the criteria set forth in 40 CFR § 2.208. EPA will disclose business information entitled to confidential treatment only as authorized by 40 CFR Part 2, Subpart B. If no claim of confidentiality accompanies the information at the time EPA receives it, EPA may make it available to the public without further notice.

5. Notice is hereby given, pursuant to 40 CFR § 2.301(h), that EPA may disclose confidential information provided by TRC to EPA's authorized representatives, including its contractors. Confidential information may be disclosed to EPA's authorized representatives for the following reasons: to assist with document handling, inventory and indexing; to assist with document review and analysis for verification of completeness; and to provide expert technical review of the contents of the response. Pursuant to 40 CFR § 2.301(h), TRC may submit, along with its response to this Information Request, any comments regarding EPA's disclosure of confidential information to its authorized representatives.

6. If information or documents not known or available to TRC at the time of its response to this Information Request later become known or available to it, it must supplement its response to EPA. Moreover, should TRC find at any time after the submission of its response that any portion of the submitted information is false or misrepresents the truth, TRC must notify EPA as soon as possible and provide EPA with a corrected response.

7. If information responsive to a request is not in the TRC's possession, custody, or control, identify the persons or entities from whom such information may be obtained. For each individual or entity that

possesses responsive information, please provide the following: name, last known or current address, telephone number, and affiliation with the TRC or the Facility.

8. If you believe there are grounds for withholding information or documents that are responsive to this request, e.g., attorney-client privilege, you must identify the information or documents and state the basis for withholding.

DEFINITIONS

The following definitions apply to the following terms (words or phrases) as they appear in this Information Request. Defined terms are enclosed in quotation marks:

1. "You" or the "Company" shall mean PBF Energy d/b/a Torrance Refining Company (TRC), or its officers, managers, employees, contractors, trustees, partners, successors, assigns, and agents.

2. "Facility" means all buildings, equipment, structures, installations, pipes, or stationary items owned, leased, or operated by the Company, at the property or properties located at: 3700 W 190th Street Torrance, California or contiguous or adjacent to that address:

3. As used here, "document" and "documents" shall include writings of any kind, formal or informal, whether or not wholly or partially in handwriting (included by the way of illustration and not by way of limitation), any invoice, receipt, endorsement, check, bank draft, canceled check, deposit slip, withdrawal slip, order, correspondence, record book, minutes, memoranda of telephone and other conversations (including meetings, agreements and the like), diary, calendar, desk pad, scrap book, notebook, bulletin, circular, form, pamphlet, statement, journal, postcard, letter, telegram, telex, report, notice, message, analysis, comparison, graph, chart, interoffice or intra office communications, photo-stat or other copy of any documents, microfilm or other film record, any photograph, sound recording on any type of device, any disc or other type of memory generally associated with computers and data processing (together with the programming instructions and other written material necessary to use such disc other type of memory). The terms "document" and "documents" include (a) every copy of each document that is not an exact duplicate of a document which is produced, (b) every copy that has any writing, figure or notation, annotation or the like, (c) drafts, (d) attachments to or enclosures with any documents and (e) every document referred to in any other document.

4. All terms not defined herein shall have their ordinary meaning, unless such terms are defined in the Clean Air Act or its implementing regulations at 40 CFR Part 68, in which case the statutory or regulatory definitions shall apply.

INFORMATION REQUEST QUESTIONS

1. Provide a response to each numbered and lettered Finding in the transmittal letter accompanying this Information Request, indicating if the Company accepts or disputes the Finding.

    a. If the Company agrees with the factual basis for the Finding, indicate if the Company is presently in compliance with the cited requirement.

        i. If the Company is presently in compliance with the cited requirement provide the following information:
            A. The Company's first date of non-compliance;
            B. A description of what activities the Company undertook to come into compliance; and

C. The date on which the Company came into compliance.

ii. If the Company is presently not in compliance with the cited requirement provide the following information:
A. The Company's first date of non-compliance;
B. A description of what actions the Company will undertake in order to come into compliance; and
C. The date by which compliance will be achieved.

b. If the Company disputes the factual basis for the Finding or any portion of the Finding, including the dates asserted for each potential violation, provide the basis and supporting documentation for each such assertion.

2. For each Finding provide cost information relating to work undertaken, planned, or considered to correct identified deficiencies. Cost information may be either actual or estimated and shall be disaggregated by: a) one-time costs (such as for engineering and permitting); b) capital costs (such as for equipment); and c) incremental annual operation and maintenance costs relative to the Company's level of effort as that existed in March 2017. For each cost item provided indicate if actual or estimated.

3. Provide the design specifications, including all calculations, for the mitigation systems identified in the Safety and Environmental Precautions section of *OM-05-005 MHF Unloading to 5C-31 SOP*. Include in the description of which vessels are included in the mitigation system's 10,000 limit and how this limit was established.

4. Provide all complete Management of Change documents for instances when safeguards in the Alkylation and/or Acid Evacuation System were bypassed from July 1, 2016 to present.

5. Provide a description, including a detailed diagram and the control of defeat records, for the critical equipment bypassed starting on August 8, 2016, as referenced in the document TORC-EPAIX16 003208 under the description "All fire systems/equipment included in Plan 1 of VAL-5-11 Replacement. Detailed diagram attached to COD."

6. Explain if the quantities listed in TORC-EPAIX16 002846 are for Modified Hydrofluoric Acid or only for Hydrofluoric Acid.

7. Provide a copy of the control of defeat records for 5SV97 (PSV for 5C54) identified on the November 4, 2016 alkylation console team lead shift handover log (TORC-EPAIX16 002884).

8. Provide the design information for vessel 5C-39, #2 Acid Regenerator.

9. For the iso-stripper overhead pressure controller, PC05102, provide:

a. The design information; and

b. All instrument testing and preventative maintenance records.

10. For vessels 5C-37, 5C-38, 5C-31, and 5C-54, provide a description and any supporting documentation for:

a. The level alarm set points and explanation for the established level for each vessel;

b. Administratively controlled level set points; and

c. All incident investigations for near misses for instances outside of the levels established under paragraph (a) and (b).

11. For both 5C-37 and 5C-38, provide tables that compare the height of material in the vessel to volume and equivalent quantity of HF in pounds. Please include the calculations used to determine the equivalent quantity of HF.

12. Provide an explanation of the existing practices for the storage of HF in vessel 5C-54, including a list, from July 1, 2016 to present, of instances when HF, Sulfolane, Acid Soluble Oil, or alkylate, was added or removed from 5C-54. Include a description of the Company's policies for the use of 5C-54 for storage.

13. For PC05101 provide the following information:

a. The most recent Process and Instrumentation Diagrams which it appears;

b. Documentation supporting the reason for why operators "raised PC0510 low pressure alarm to 195# and lowered the upper alarm to 230 psig due to limitations in the procedure"; and

c. Identify the procedure referenced in paragraph (b) and the referenced limitations.

14. Provide a statement discussing the Company's relationship with its parent company, if any.

15. Provide a statement and supporting documentation indicating both the Company's present net worth and gross revenues for calendar and/or fiscal year 2016.